

# Home

An Argus Specialist Publication

Every week: your  
best buy for  
software reviews  
and listings

# Computing WEEKLY

No 75  
Aug 14 - 20 1984

45p

## WIN

**Dune Buggy,**  
the new  
fast-action game  
from Mushroom  
Software

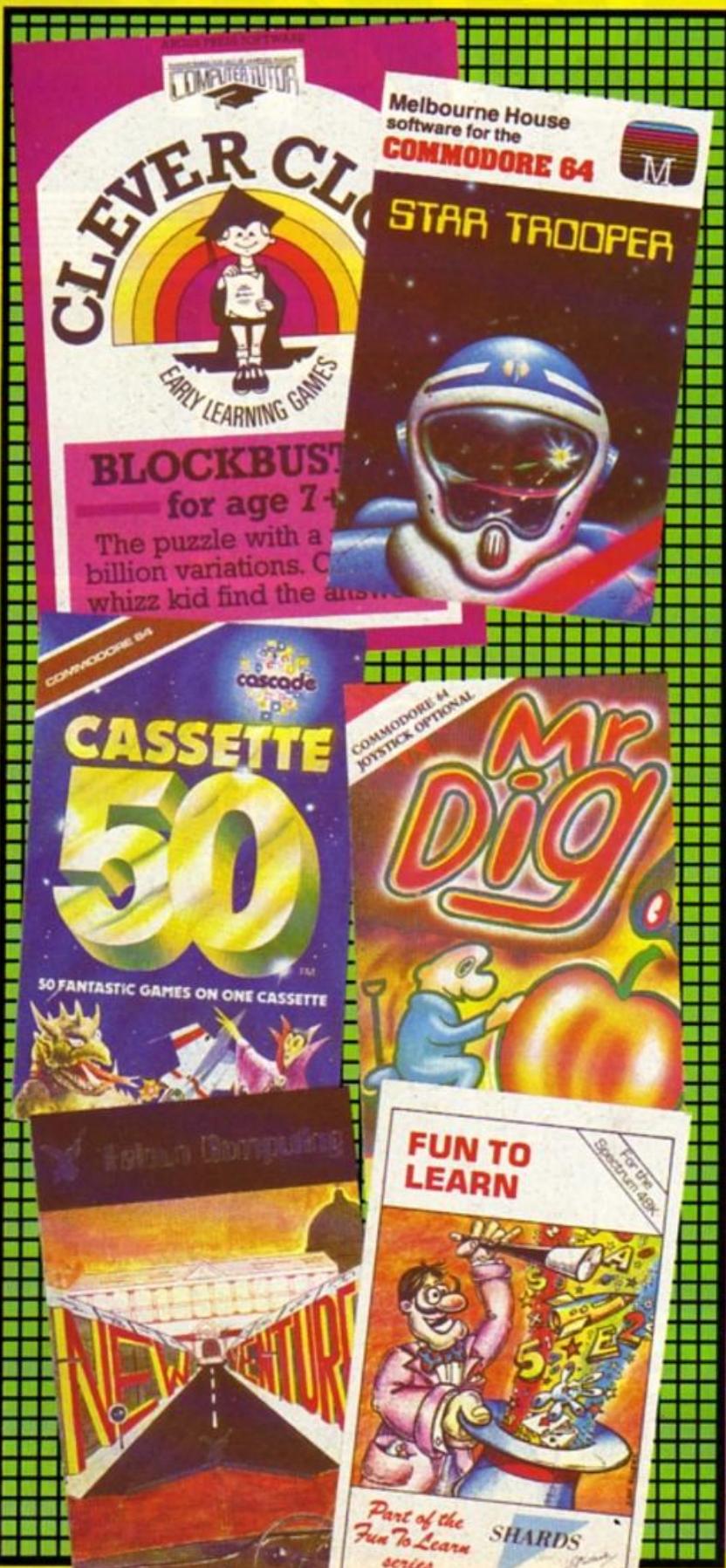
**Software  
Reviews for:**  
Spectrum, BBC,  
Electron, TI, Sord,  
CBM 64

**Spectrum  
Special**  
Three great  
games to type in

**BBC**  
Sharpen your  
gnashers with  
our Splurge Eater  
game!

**PLUS**  
your letters,  
software charts,  
news...

## TITANIC



## Judo star in micro show

Judo star Brian Jacks is to feature in a new BBC TV series about computers.

He will represent Mr Average as he and his wife Julie go through the process of buying a computer and learning how to use it, particularly to help their son Philip, aged five.

The new series, Micro Live, starts on October 5 at 6.30pm on BBC 2 with presenter Ian McNaught-Davis and director Patrick Titley.

Micro Live will be monthly, followed by a two-hour live show in the summer and then the series goes weekly.

Regular reports will come from a character in New York called Freff and ex-Blue Peter presenter Lesley Judd will report on UK events.

Among the items in the first show is a review of printers for home computers, a feature on the break-up of AT&T, the US phone company, on the eve of the liberalisation and

*Continued on page 5*

## Card to foil pirates

A credit card can help stop software piracy, says Rising Edge Data (RED) which has developed a protection system.

Development has taken many months and started because Abacus programs, which owns RED, like many other software publishers, is losing money to the pirates.

RED is a simple system, claimed to be fool-proof, that can be adopted by any software company or programmer and, while it prevents mass copying, it still allows the computer enthusiast to make back-up copies.

The secret of RED is in the digitised security card which is the same size and shape as a credit card. The reader unit, which plugs into the computer, prevents the program from being run until the system is activated by the RED card.

Each card carries a magnetic coding, identical to a program code written into the software for the particular game. Only when the computer can match

*Continued on page 5*



# HERE TO STAY



## TEXAS INSTRUMENTS HOME COMPUTER TI-99/4A £89.00

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# Home Computing WEEKLY

**THE JOURNEY**  
**THE ADVENTURE**  
**OUT SOON**  
**FROM Temptation**

## REGULARS

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## PROGRAMS

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<b>Readers:</b> Your programs and articles can earn cash (and the admiration of your friends!). Send them to us for evaluation by experts	

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# SUPER SAVERS

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VC 20			BONGO	£7.95	£6.95
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FROG RUN	£5.95	£5.20			

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THE WAY FORWARD FOR THE TI 99/4A

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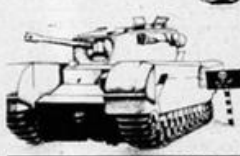
#### BUILDER/MINEFIELD



#### NEW RELEASES

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**LANTERN**

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## PROGRAMMERS

### £1,000 REWARD!

We are offering a prize of £1,000 for the best arcade game program submitted to us by August 31, 1984 for either the 48K Spectrum, Commodore 64 or Amstrad. The program must be your own copyright which will be assigned to us on presentation of the award. The winner will also receive royalties based on our normal, escalating royalty package, for all copies of the program sold for any home computer. To enter, submit a copy of the program together with full operating instructions to:

R M Summers  
**STERLING SOFTWARE**  
Garfield House  
86-88 Edgware Road  
London W2 2YW

The decision of the publishers will be final and the name of the winner will be announced in the computer press.

Sterling Software is a division of Sterling Publications Limited.

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## Judo

From front page

privatisation of British Telecom.

Mr Titley said the series would cover the whole world of information technology: "Everything that has a chip in it."

## Card

From front page

the code on the RED security card with the code on the tape, does it allow the game to commence.

This means that although tapes can be copied, the program will not run without a RED card — making it useless to pirates.

Managing director Cathie Shaw said: "The ideal situation would be where every person who has a home computer would also have a RED system — then we would have total software protection."

Mrs Shaw explained that the cost for RED on a business system was somewhere in the region of £20 and said: "But the cost for a home computer will be proportionally less — and I expect it to be about £4."

Cost of the software should not alter. According to Mrs Shaw: "The cards are very inexpensive, and should easily be absorbed within the profit margins of software companies."

Rising Edge Data, 716 Llan-gyselach Road, Swansea

## Sounds great!

Use your Spectrum to create new sounds. Just out from dk'tronics: Beep Amplifier, with volume control (£14.95) and Three-channel Sound Synthesizer (£29.95).

The synthesizer incorporates the beep amplifier to improve sound quality and output. This interface means you can program your own music over a complete eight-octave range as well as control three channels of tone and/or white noise.

dk'tronics, Unit 6, Shire Hill Ind Est, Saffron Walden, Essex CB11 3AQ

## All clued up

Adventure games are gaining in popularity, and the big test for software houses is to find one that stands out from the crowd. Soft Concern thinks that The Code does just that — "it's an adventure game with a difference", is the claim. The added incentive to complete the game is a cash or computer equipment prize worth £2,500 for the first correct entry.

The Code runs on the 48K Spectrum and costs £9.95. When you play the game, you're thrown into a spy thriller scenario. Your time is limited and your mission is to piece together clues and move between the four levels to reach the code room. This is where the real puzzle begins. Hazards you encounter are enemy agents, time bombs and red herrings.

Soft Concern is doing its bit to thwart piracy by coding all copies of the cassette together with the buyer's name and address. If you order by mail, your cheque must have your banker's card number on the back.

Soft Concern, PO Box 65, Warwick CV34 4JY

Summer releases from Shards include Operation Safras for the Dragon. Promoted as the long awaited sequel to Pettigrew's Diary, Shards claims it has some of the best sound and graphics available for the Dragon, as well as over 90K of mystery and suspense and a free music tape offer. Price: £7.95.

Shards, Roycraft Hse, Linton Rd, Barking, Essex

Three new games from Kerian: Crystal Frog, Motorcycle Crazy! and Meltdown. They cost £5.95 each and run on the 48K Spectrum. Crystal Frog and Motorcycle Crazy! are adventures, while Meltdown is an arcade game.

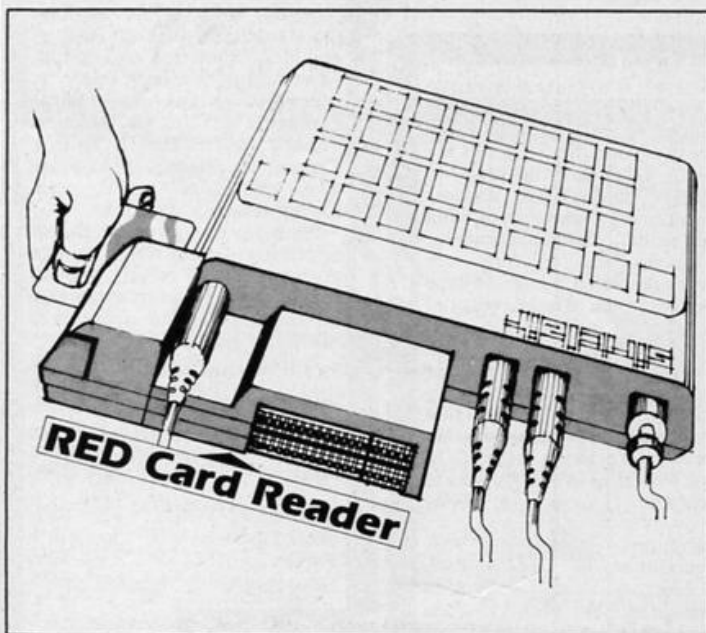
Kerian, 29 Gisburn Rd, Hessle, N Humberside HU13 9HZ

You may remember reading about Database's Micro Olympics. Well, now it's available for the Commodore 64 and Spectrum as well as the Russians. Perhaps this game will be one small step to promoting world harmony, even if the Olympics fail to do just that...

Database, Europa Hse, 68 Chester Rd, Hazel Grove, Stockport SK7 5NY

Argus Press Software has launched a series of programs called Mind Games. Three are now on general release, and nine more will be ready by September. They're games of strategy, and the first three are science fiction based. Orion Quest, Quest for Eternity and Star Force Seven have one thing in common: you are in a hostile universe and you have to think your way out of your problems. Initially available for Spectrum, BBC and CBM 64, they cost £7.99 for the Spectrum and £9.99 for BBC and Commodore versions.

Argus Press Software, No. 1 Golden Square, London W1R 3AB



RED's "credit card" system in action



### 16K ZX81

Here is a selection of titles still available for ZX81. Send s.a.e. for illustrated catalogue. These are the ZX81 equivalents of the Spectrum programs described above. Although similar in concept the specifications fall short of the descriptions given for the Spectrum.

"FOOTBALL-LEAGUE" Forerunner of "Day of the Match" £4.00

"TEST-MATCH" Forerunner of "Ball by Ball" £4.00

VIDEO SOFTWARE LTD.,

Stone Lane, Kinver, Stourbridge, West Midlands Telephone: 0384 872462

## SOFTWARE FOR SPECTRUM AND ZX81

### 48K SPECTRUM

"Day of the Match" £5.00 Fascinating and realistic simulation of an entire football season. Name your own teams if you wish (English league provided on cassette). Rate each team from one to nine in various success categories such as attack, defence, manager, etc. Watch the season unfold, includes knock-out option.

"Ball by Ball" £5.00

Simulates a test match series of one day international series. Set up your own teams and pool of players (England v Australia provided). Rate each player's capabilities as batsman and bowler on a one to nine scale for qualities such as talent, effort etc. Pick your teams and play the match. Electronic scoreboard shows progress of a match. Full supporting score card and series averages.

**VIDEO** SOFTWARE LIMITED



## Fun to Learn 6-12 48K Spectrum £6.95

An invitation to enter your name precedes Menu offering games, option to change screen writing speed, user's name and see total score.

Count has a number of letters which you must count. Correct answers play a short tune but wrong answers bring a deep tone and some comment, followed by replay option or return to Menu.

Mixer, a word recognition game, allows you or the computer to choose anagrams. One-letter can be requested, which lessens the score. It's a shame upper case is used.

Calculation is where numbers up to four figures entered by the

player are calculated by the computer offering the four rules — unfortunately not in scholastic vertical format.

Starship is a form of Hangman, where an alien zaps a building with every mistake, or your spaceship when you fail, while the ship zaps an alien if you are correct.

Codebreaker allows decoding or coding of a word with one of three codes on screen (or your made-up one) or the computer codes or decodes it for you.

Large redefined character set is used throughout. T.W.

instructions	80%
ease of use	80%
display	75%
value for money	60%



## Billy Ball Plays Catch TI-99/4A £6

Stainless, 10 Alstone Rd, Stockport, Cheshire

Another game featuring an amusing character by the name of Billy Ball. Last I saw of him he was at a hatchery, here he's busy playing catch.

Various items fall down the screen, one at a time, and Billy must catch them. If he misses three times, he will lose a life.

A fierce green monster tries to stop our little friend, so Billy may either evade him by climbing ladders and jumping from platforms, or take more positive action by punching him, should he come too close for

comfort. The monster sometimes goes rather red in the face, however, and speeds up his chase for revenge.

If Billy successfully catches, a box at the bottom of the screen is filled in. When all have been filled he progresses to more difficult screens.

All have superb graphics, which compensate for the somewhat slow action during the game's initial stages, but things definitely "hot up" after the fourth screen. Needs Extended BASIC, joystick. J.W.

instructions	90%
playability	80%
graphics	90%
value for money	100%



## Maths Utilities Library 48K Spectrum £8.95

Solway, 6 Curzon St, Maryport, Cumbria CA15 6LL

A combination of Solway's three utilities packs — with a saving of £1.55 — which can only be used on a 48K machine. If the programs halts at any time due to an error correction it can be restarted by entering RUN 5.

The contents offers graph plotter, linear regression, mean and standard deviation, zeroes of functions, rectangular and polar co-ordinates, circular geometry, triangle solution, regular polygon solution, numerical integration, change of bases, simultaneous equations and quadratic equations. It is not a teaching program — its use is in producing solutions quickly to problems.

Each section-ending allows return to Contents — shown by a green 'r' screen top right — or to repeat that section.

The instructions are carefully planned to take you through from start to solution, and each program is accessed by pressing the appropriate key shown on the contents list display.

My copy was pre-production, accompanied by 16 A4 sheets of explanation, so I would be interested in seeing how those explanations reduce on to a cassette insert — or will a printed booklet replace them? Fair use is made of the Spectrum's potential of music, colour and memory.

T.W.

instructions	75%
ease of use	65%
display	50%
value for money	60%



# School's out for summer

Use the summer break to  
reinforce your child's  
education with these  
programs. It's fun to learn, so  
they say

## Blockbuster 48K Spectrum £7.95

APS, No. 1 Golden Square, London W1R 3AB

In this Computertutor program Clever Clogs comes on screen flashing "Hello", giving his name to the accompaniment of music and asking for your name. Music announces instructions, which take up six screens. A menu offers choice of Whacky Blockbuster — where the computer explains how to go about it; Blockbuster — where you play; and Blockbuster Quiz — where answering 12 questions correctly allows you to see one way to complete the puzzle.

Layout, colour, sound, graphics and movement are superb making this program a pleasure to play and addictive.

The object is to make a rectangle out of 12 blocks. A box is provided to enable you to flip a piece over, and the five levels are sensibly labelled from easy, to almost impossible (other programmers take note) and relate to the rectangle's shape.

You can quit at any time — or save a completed puzzle on tape — and are then offered replay or end program facilities.

This program, for age 7+, stretches the brain and teaches shapes, relationships and co-ordinates. A useful facility is that the questions can easily be altered. A prize is offered to those who send in two answers to level four. T.W.

instructions	90%
playability	85%
graphics	85%
value for money	75%



## Shipsapes 3 = 48K Spectrum £7.95

APS, No. 1 Golden Square, London W1R 3AB

This colourful Computertutor program, for use by parent and child, contains five games with machine code animation and lively graphics to encourage shape recognition.

My queries would be the inclusion of names in Shape-maker. After inputting up to 10 sides the computer draws the shape on screen with its name — three-year-olds knowing nonagons! and Pattern Maker has shapes which can be moved by using cursor keys — why?

That aside, it's a pretty program which would entrance three-year-olds with its use of graphics, animation and sound. After using this they ought to recognise triangles, circles, diamonds, squares and oblongs. Superb horizontal scrolling: "turns" the pages and the Index gives choice of games, each having simple instructions.

Shapesorter has small shapes appearing in a box which must be given a name — correct answers cause Clever Clogs to smile with a pleasant tune, but wrong ones make him grimace.

Shipsapes is a game where a helicopter flying over a ship can be made to drop various shapes, depending upon which keys are pressed, on to a ship before it sails. T.W.

instructions	65%
ease of use	70%
display	80%
value for money	60%





# THIS IS THE BIG ONE!

## The 2nd Official Acorn User Exhibition

**OLYMPIA AUGUST 1984**

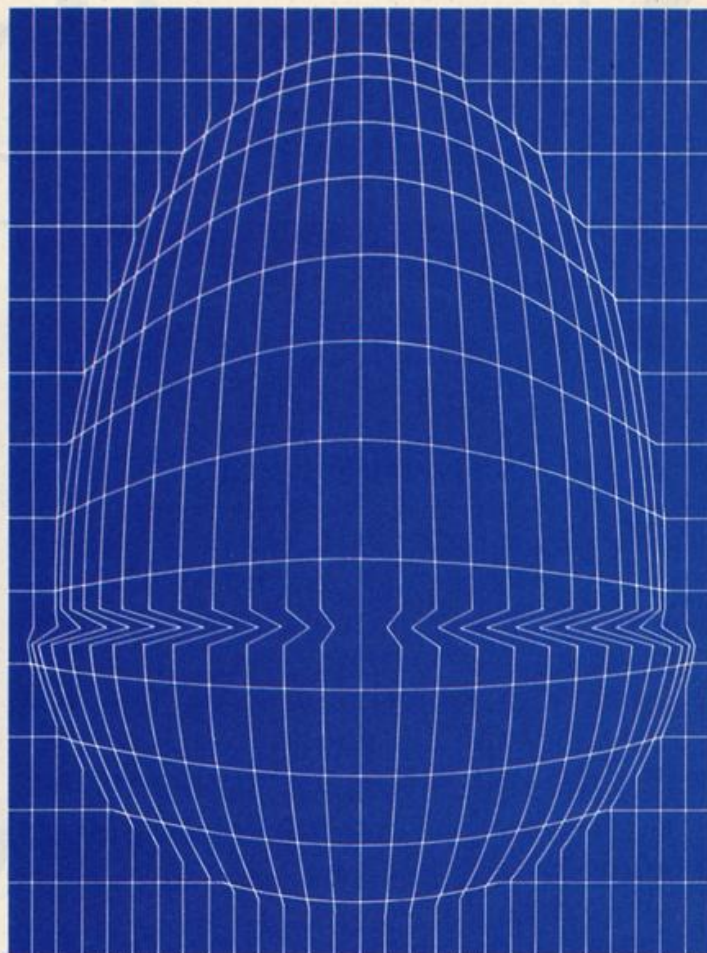
Thursday 16th – 10am to 7pm

Friday 17th – 10am to 6pm

Saturday 18th – 10am to 6pm

Sunday 19th – 10am to 5pm

\* Please note 10am to 2pm on Thursday 16th  
is Trade Morning – By invitation only.



### BIG VALUE

The success story of Acorn Computers, the BBC Micro and Electron is mirrored by suppliers who have produced more and more hardware, software, supplies and services. And they'll all be at the exhibition – disk drives, plotters, printers, monitors, joysticks, robots, books and magazines, all kinds of software – everything for the Acorn owner.

And of course Acorn will be there in force with all their latest developments and software.

There'll be special offers, competitions, advice centres and special events as well.

And all this for only £3.00 at the door, under sixteens £2.00. (Use the coupon to beat the queues and save £1.00).

### BIG VENUE

Olympia 2 is the brand new exhibition centre next to the old Olympia. It's got everything, wide gangways, lots of space to sit down and rest, plenty of catering areas.

Getting there is easy too, its got its own tube station, bus routes 9, 27, 28, 33, 49, 73 and 91 go right pass the door, and there's car parking too!

### BIG SUPPORT

Remember this is the *Official Acorn User Show*, it's the most informative prestigious and influential user show in the country. Whether you're a businessman, serious user or games enthusiast there's something for you.

For details of exhibition stands and advance ticket sales contact the organisers.

Computer Marketplace (Exhibitions) Ltd. A Rushworth Dales Group Company, 20 Orange Street, London.  
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# Now, the BBC

The BBC Micro has now taken a giant step into the world of business computing.

With the addition of its new Z80 second processor, it is the first computer at anywhere near its price to become fully compatible with CP/M software.

As most business computer users can verify, CP/M is the most widely used form of software in business today.

For £299, you're well and truly in business.

At £299, the Z80 adds 64K of usable RAM to the BBC Micro. And it allows you to use the CP/M 2.2 computer operating system.

It's extremely fast.

And besides giving you access to a vast new area of software, it enables you to use GSX graphics-based programs, the perfect complement to the BBC Micro's own superb graphics.

Free software and languages.

The Z80 second processor comes complete with five CP/M business programs.

To handle your word processing, there's MemoPlan. It's a program with some highly sophisticated features, such as a safeguard against data loss through power cuts and the ability to show two documents simultaneously on the screen.

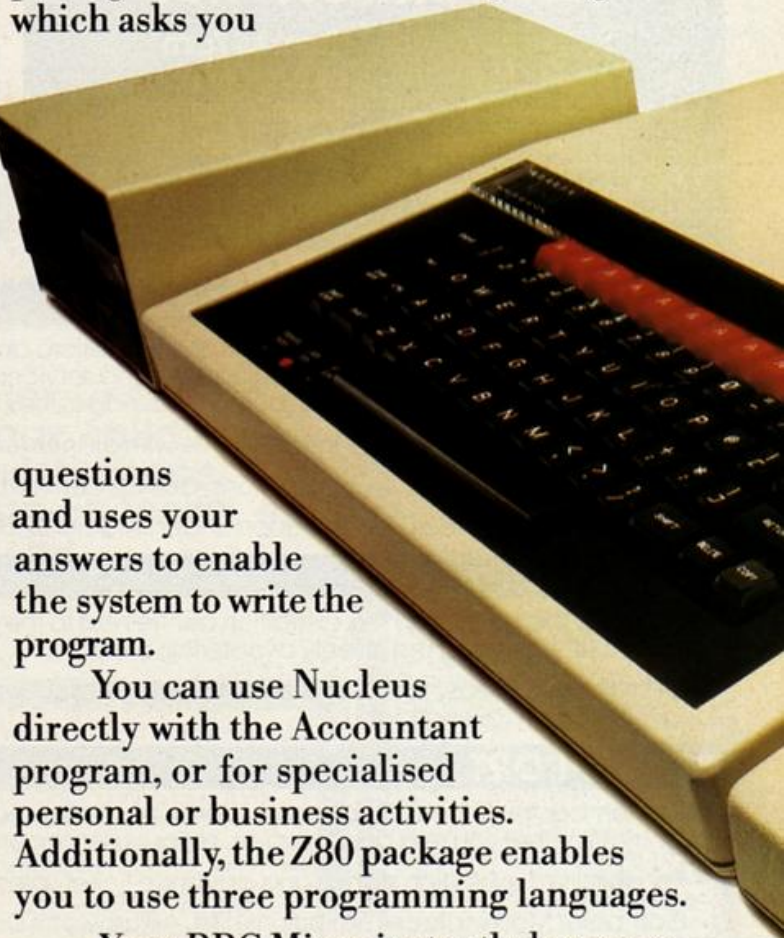
To form your CP/M personal database, there's FilePlan. It stores names, addresses, telephone numbers, stock listings and more. And if you use it with MemoPlan, you can generate personalised letters, labels and mail shots.

To produce forecasts and analyse groups of figures diagrammatically, simply use the GraphPlan program. This is incredibly helpful in working out vital business calculations, converting them into graphs and charts.

Meanwhile, in the book-keeping department, there's the Accountant program.

Use it to enter day-to-day transactions into the computer. Then, at any time, you can ask the computer to produce lists, summaries, reports, audit trails and trial balances. You can readily expand this package to a fully ledger based system, complete with payroll and more.

Finally, to help you to develop your own programs without having specialised experience, the Z80 comes with another software package called Nucleus. It's a system generator which asks you



questions and uses your answers to enable the system to write the program.

You can use Nucleus directly with the Accountant program, or for specialised personal or business activities. Additionally, the Z80 package enables you to use three programming languages.

Your BBC Micro instantly becomes multi-lingual.

To simplify writing your own software with the Z80, there's BBC BASIC.

For running professionally written business programs, there's Professional BASIC.

And then there's CIS COBOL, the leading microcomputer version of COBOL, the language used in mainframe computer applications throughout commerce and industry.

With CIS COBOL, the Z80 also gives you two sophisticated programming aids.



# Macro.

One is Animator, an award winning debugging tool which enables you to identify programming errors quickly and easily.

The other is FORMS 2, which helps you to write your own interactive programs in COBOL.

With all these sophisticated features, the Z80 package is exceptional value for money. Indeed, bought separately the programs and languages could cost as much as £3,000.

## See the Z80 at work.

The Z80 second processor is designed to be used with the BBC Micro Model B incorporating a Series 1.2 Machine Operating System and linked to a dual 80-track disc drive, a printer and monitor.

Ask your BBC Micro dealer to show you just how far it can go in the world of serious business computing.

For your nearest dealer, ring 01-200 0200.

## Technical specification.

The Z80 has a 64K Random Access Memory, running CP/M 2.2 which provides approximately 55K bytes of RAM for user programs.

It operates at a clock rate of 6MHz.

Power supply is integral. Height, 70mm. Width, 210mm.

Depth, 350mm.



## The BBC Microcomputer System.

Designed, produced and distributed by Acorn Computers Limited.



# CHARTBUSTERS

## BRITAIN'S SOFTWARE

# CHARTS

by the ASP Market Research Group

### ARCADE

1 Match Point	Sinclair	Spectrum (2)
2 Sabre Wulf	Ultimate	Spectrum (3)
3 Fighter Pilot	Digital Int.	Spectrum (-)
4 Lords of Midnight	Beyond	Spectrum (-)
5 Trashman	Quicksilver	CBM 64 (4)
6 Beach Head	US Gold	CBM 64 (1)
7 Frak	Aardvark	BBC (9)
8 Jet Set Willy	Software Projects	Spectrum (5)
9 Son of Blagger	Alligata	CBM 64 (6)
10 Tornado Low Level	Vortex	Spectrum (-)

### NON-ARCADE

1 Valhalla	Legend	CBM 64 (1)
2 Mugsy	M. House	Spectrum (2)
3 War of the Worlds	CRL	Spectrum (5)
4 The Hobbit	M. House	CBM 64 (-)
5 Fall of Rome	APS	Spectrum (3)
6 The Inferno	R. Shepherd	Spectrum (8)
7 Sphinx Adventure	Acornsoft	BBC (9)
8 Aviator	Acornsoft	BBC (-)
9 Mastermind	Commodore	CBM 64 (-)
10 Classic Adventure	M. House	CBM 64 (-)

Compiled with the assistance of Britain's leading software distributors, including: Pinnacle, SDL, PCE, Websters, PCS and Software Centre.

### SPECTRUM

1 Match Point	Sinclair (1)
2 Mugsy	M. House (-)
3 Fighter Pilot	Digital Int. (-)
4 Stop the Express	Sinclair (2)
5 Jet Set Willy	S. Projects (-)
6 Code Name Matt	Micromega (-)
7 Night Gunner	Digital Int. (-)
8 Pystron	Beyond (-)
9 Jack & the Beanstalk	Thor (-)
10 Bulls Eye	Mastertronic (-)

### COMMODORE 64

1 Hektik	Mastertronic (1)
2 The Election Game	Mastertronic (4)
3 Squirm	Mastertronic (3)
4 Trashman	Quicksilver (5)
5 Sheep in Space	Liamasoft (6)
6 Encounter	Hi-Tech (7)
8 Son of Blagger	Alligata (-)
9 Loco	Alligata (-)
10 Incredible Hulk	Adventure Int. (8)

### DRAGON 32

1 Chuckle Egg	A & F Software (-)
2 Hunchback	Ocean (1)
3 Ugh!	Softtek (2)
4 Dungeon Raid	Microdeal (7)
5 Buzzard Bait	Microdeal (-)
6 Dragon Chess	Oasis Software (-)
7 Mr Dig	Microdeal (-)
8 Cuthbert goes Digging	Microdeal (-)
9 Cuthbert in the Jungle	Microdeal (9)
10 Devil Assault	Microdeal (10)

Compiled by W. H. Smith and Websters. Figures in brackets are last week's positions.

### VIC-20

1 Flight Simulator	Ferranti Davenport (-)
2 Bewitched	Imagine (-)
3 3D Maze	Mastertronic (9)
4 Computer War	Creative Sparks (10)
5 Wizard & the Princess	Melbourne House (-)
6 Tank Commander	Creative Sparks (-)
7 Crazy Kong	Interceptor Micro (5)
8 Tower of Evil	Creative Sparks (-)
9 Games Designer	Galactic (-)
10 Sub Commander	Creative Sparks (-)
11 M.L.A.B.A.T.E.T	Liamasoft (-)

### BBC

1 Football Manager	Addictive Games (1)
2 Aviator	Acorn (-)
3 Snooker	Visions (6)
4 Word Wise	Computer Concepts (-)
5 Spectipede	Mastertronic (2)
6 Rubble Trouble	Micropower (5)
7 Demolator	Visions (-)
8 Q Man	MRM (6)
9 Diamond Mine	MRM (-)
10 Spitfire Command	Superior Software (-)
11 Ghouls	Micropower (3)

### ZX81

1 Alien Rain	CRL (4)
2 Krypton Ordeal	Novus (2)
3 Planet Raider	Novus (2)
4 Black Crystal	Carnell (-)
5 Walk the Plank	Novus (5)
6 ZXDB Disassembler	Bug Byte (-)
7 Games 1K	Sinclair (-)
8 Mothership	Sinclair (9)
9 Espionage Island	DK Tronics (-)
10 Meteor Storm	DK Tronics (-)
11 Adventure	Bug Byte (7)



## Spiders/ Simon/Granny Unexpanded Sord M5 £12.95

CGL, CGL Hse, Goldings Hill,  
Loughton, Essex IG10 2RR

In **Spiders**, you must move a little figure to the other side of the screen. The difficulty is that you are pursued by large, venomous spiders and you must avoid their webs. The idea is good and the characters are well defined. The only problem is that it's incredibly difficult to get a decent score, so you're left feeling frustrated and angry!

**Simon** is the M5 version of the electronic game. The object is to correctly repeat an increasing sequence of colours, numbers and sounds. This is a good

implementation but I found the original electronic game boring and this version didn't interest me either. I suppose you could get hooked if you like the original though.

In **Granny**, you are in control of the green man whose task is to get the old ladies across the busy road. The storyline is good but the sound and graphics could have been infinitely better.

These games are fun for the first few goes but would probably pall after that. It's a shame machine code was not used. ) S . S .

instructions	50%
playability	60%
graphics	40%
value for money	50%



## Pengi TI-99/4A £5

Stainless, 10 Alstone Rd, Stockport, Cheshire SK4 5AH

**Pengi** is an original game in which a small character is being chased by yetis. (Judging by the scenery, the action takes place on a mountain range.)

On the first screen, you must kill two yetis, in the second, four, and in the third, six, and so on.

To kill a yeti, you must use the space bar to push a block of ice at him. This isn't as simple as it sounds, because each block of ice must travel over at least one space before hitting a yeti. If an ice block is pushed into another ice block before moving over any spaces, it will shatter.

Things get really tough when the screen becomes very yeti-infested. Every time a yeti moves into a block of ice, the ice vanishes, and the more yetis, the less ice.

Only a very small portion of the screen is used to display the action. This, as well as the lack of sound, is probably to speed the game up, but it does not make full use of the TI's facilities.

However, very good graphics are used in the top half of the screen to show beautiful, snow-capped mountains. J.J.

instructions	70%
playability	70%
graphics	85%
value for money	60%



## Cassette File Handling TI-99/4A £3.50

B. Jackson, 21 Rowan Way,  
New Balderton, Newark, Notts  
NG24 3AU

An Extended BASIC cassette filing program for all those who have either been unable to master file processing or don't have the time or patience to produce their own routines. In some respects it is better than the Personal Record Keeping module, in others, worse.

For the price, I reckon it's very good value. Each file consists of up to 100 'cards', and each card can contain up to four items of information. The name of a file can be up to 14 characters, and the names of the items of information can be up to 24 characters. Each item of information can be up to 23 characters, allowing you to store a greater amount of data per item than the 15 offered by the PRK module.

However, only four items per page places some restriction on, for example, an address book file. Among the options are Insertion, Deletion, Addition of items, and alphanumeric sorting by item. Documentation is sparse, but then little is needed for a program which is largely self-explanatory. For large files, however, cassette storage is impractical and rather risky, due mainly to the problem of shedding oxide and consequent drop-out. P.B.

instructions	85%
ease of use	95%
display	85%
value for money	100%



# Fun, and a bit more serious

Play the games... then try the  
utilities. But read what our  
reviewers have got to say first

## Slot Expanded Sord M5 £5.95

CGL, CGL House, Goldings  
Hill, Loughton, Essex IG10 2RR

**Slot** is an implementation of the popular gambling game, One-armed Bandit. When it's loaded, the reels are drawn and you start with a fixed amount of credit. When you press 1, the reels change — absolutely no animation — and your credit is adjusted accordingly to the result of the reels.

You may be given the chance to Nudge or Hold as in the real version. I'm a terrible player and have sworn never to play this game, but in this version, I won money without even looking at the reels and in the end I was desperately trying to run out of

money with no success! Games shouldn't be too difficult but this is ridiculous.

Technically, the program is just better than awful. What happened to sound effects and smooth animation?

I've always thought implementing gambling games on computers was a waste of time since the attraction of the real thing was the thought of making money and this program does nothing to change my view. Quite honestly, this program wouldn't even be worth publishing as a magazine listing. S.S.

instructions	50%
playability	0%
graphics	10%
value for money	0%



## Music Maker/ TI Ludo/ Charset 1 TI-99/4A £5.95

PiKaDee, 35 Parker St, Preston,  
Lancs PR2 2AH

Three programs, the most outstanding of which is **TI Ludo**. It's worth the money for this alone. The game is for one to four players. The computer will participate if requested but, I warn you, it does have an uncanny knack of winning.

**Music Maker** is a brave attempt at a difficult program to produce, for creating tunes on the TI. Those you compose may be saved in files and loaded when you want to play them again. The example is a rendering of Lily the Pink.

The screen display shows two staves. Using the cursor keys, notes, from F below Middle C to F flat three octaves above this, may be entered. Complete options are included to change mistakes and edit notes in memory. Tunes may be played as two or three note chords, or with a very effective echo.

Unless you have a basic knowledge of music, you'll find this difficult to understand and use.

**Charset 1** contains character sets re-defined and their hexadecimal codes stored in DATA statements to use in your own programs. J.W.

instructions	80%
playability	70%
graphics	50%
value for money	90%





You're a gourmet Splurge Eater. On this grid, living in walled dens, are Splurges, which are tasty and appetizing. A feast is in store for you.

Wherever you walk around the grid, you destroy the squares you walk on. You can only walk on grid squares, so you need to plan your route.

Full instructions are given in the text. Beware the hidden danger — the guardian of the Splurges. Your life is in danger from him. He doesn't appreciate the Splurges being eaten so he won't let you get off lightly.

The game runs on any BBC with an O.S. of 1 or greater. The program is only 4K, so there's enough room for expansion on a tape system. You could animate the Splurges, using explosion characters, so that they appear to die away. You could add speech if you have a speech chip. If you know machine code you could speed the game up, as after grid 7 the response speed of the Splurge Eater slows down slightly.

Type in the first program and save it with the name SP-INTR. Then type in the second listing and save it with the name SPLURGE.

#### PROCedures

**MAN lines 90-360** This PROCedure moves the Splurge Eater around the screen in response to keys pressed. It also animates the movement of the Splurge Eater's mouth and calls up the procedure to MOVE LINE when the TAB key is pressed.

This procedure also detects if the Eater has eaten a Splurge and if so it calls up EAT SPLURB. If the Eater is trying to move on to a blank square instead of a grid square, the procedure will not allow it to move.

**MISSILE lines 380-590** This PROCedure contains the logic for the missile to home in on you and the routine to make it move across the screen without destroying what is already there.

This routine does not work properly and will sometimes erase what is below it; this is no major problem but you may like to solve it. The homing routine from 400-500 works but could do with some improvement.

**Set Up lines 610-850** This PROCedure draws up the grid and positions Splurges around the screen making sure two Splurges do not overlap.

The number of Splurges printed is calculated at line 740 using the difficulty number as the random number seed. This means each new game has different numbers of Splurges appearing on the same board and you don't get a steadily increasing amount of Splurges as you progress through the game.

**FN READCH(X,Y) lines 870-910** This function calls up a machine code routine generated by PROC ASS. This routine is used a great deal so machine code was necessary. What it does is read the value of a character at the location provided by X and Y and return that value in C.

**KILL lines 920-1000** This PROCedure generates the graphics and sound effects when the Splurge Eater is caught by the missile. One is deducted from the number of men you have left and then the board is set up again.

**EAT SPLURB lines 1020-1060** This PROCedure is called when a Splurge is eaten. It generates a sound effect and adds 10 to the player's score.

**New Board lines 1080-1210** This PROCedure is called when all Splurges have been eaten. It calculates the bonus, depending on the time taken to clear the board. The bonus is printed on the screen, the reward tune is played and the screen is animated together with the tune. As this happens every time a board is cleared the tune and display may get a bit tiring so if the space bar is pressed during the routine the music will stop.

The speed of the MISSILE is increased, the bonus added to your score and a new board set up.

**Score Board lines 1230-1250**

**AGAIN lines 1270-1390** This PROCedure is called at the end of the game. It prints your score and tells you if you have the high score. It then asks you if

**Wrap your lips around some tasty morsels. This exciting game by Kevin Boyd is well worth the time and effort of typing in. It's a hit!**

you wish to try again.

**MOVE LINE lines 1410-1500**

This PROCedure is called up when the TAB key is pressed. The routine moves the line the player is on one space to the left and deducts 5 points from the players score. The routine will not work if the player does not have enough points to pay for the move or if a Splurge is at the end of the line and would disappear if activated. If this happens a warning buzz will sound.

**ASS lines 1520-1610** This PROCedure assembles the machine code used by FN REACH. The routine takes up 90 bytes and is stored in variable memory at line 1530.

**DEATH TUNE lines 1620-1700** This PROCedure plays the death march at the end of the game before PROC AGAIN is called.

#### Listing 1

```

1 REM *****
2 REM ** SPLURGE **
3 REM ** WRITTEN **
4 REM ** BY **
5 REM ** KEVIN BOYD **
6 REM ** DEC 83 to JAN 84 **
7 REM *****
8
10 REM DEFINE CHARACTERS & ENVELOPES
20 VDU23,233,153,126,24,165,165,24,126,153,23,234,66
,126,24,102,102,24,126,66
30 VDU23,235,66,102,24,90,90,24,102,66,23,236,66,36,
24,66,66,24,36,66
40 VDU23,237,0,36,24,36,36,24,36,0,23,238,0,0,24,24,
24,24,0,0
50 VDU23,224,&3C18;&66E7;&3CE7;&0018;
60 VDU23,225,&DBFF;&FF99;&C3B1;&FFC3;
70 VDU23,226,&FEFE;&FEFE;&FEFE;&00FE;
80 VDU23,227,&DBFF;&FF99;&FFB1;&FFFF;
90 ENVELOPE1,8,1,-1,1,1,1,1,120,-4,0,-3,126,0
100 ENVELOPE2,1,100,127,100,1,1,1,100,-3,-2,-1,80,0
110 ENVELOPE3,133,8,4,8,3,1,1,126,0,0,-10,126,0
120 ENVELOPE4,1,0,0,0,200,200,200,0,-1,0,-126,126,0
130 ENVELOPE5,1,20,-2,1,10,5,10,30,-4,0,-5,126,80
140 REM _INTRO_
150 MODE7
160 PROCTIT
170 C$=CHR$131+CHR$157+CHR$132:PRINTC$C$"Hi SPLURGE
eater ! Your job is to eat!";PRINTC$;"all the SPLURGES
on the grid !"
180 PRINTC$;"Unfortunately as you move around the "C$g
rid you destroy the grid squares" C$you walk on and as
you can only "C$move onto grid squares you will need"
C$to plan where you go very carefully."
190 PRINTC$;"All splurges are surrounded by 3" C$"si
ded walls. At times two walls will "C$overlap destroyi
ng any path into the "C$SPLURGE. So a path mover has b

```

# Shan gna

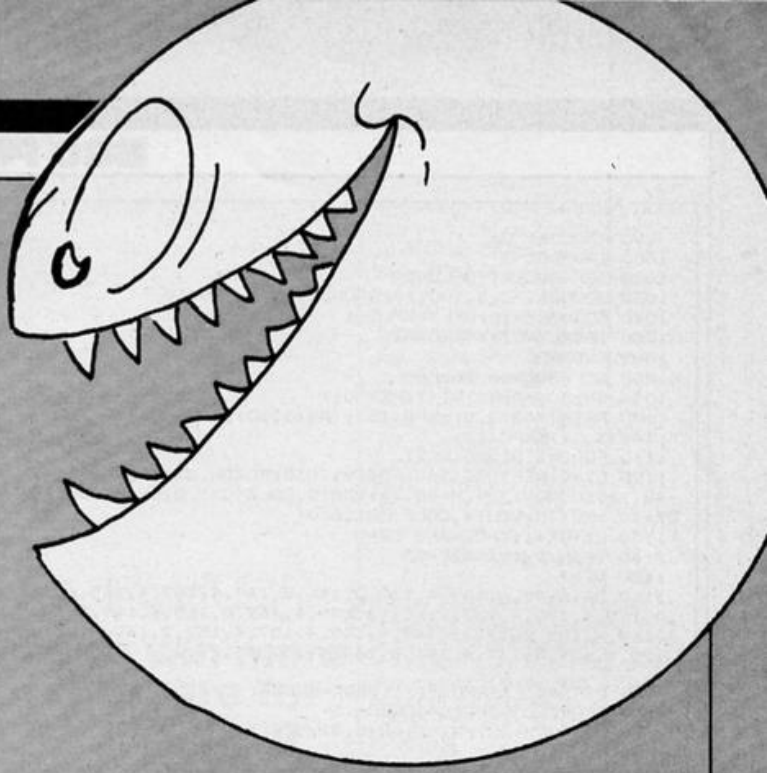
#### Variables

**DEL%** counter to determine speed of missile  
**SPEED** determine speed of missile  
**LIVES%** number of Splurge Eaters left  
**SC%** score  
**HSC%** high score  
**BRD%** board number  
**MAN%** character used for Splurge Eater, used for animation of Eater's mouth  
**NB%** flag set when new board is required  
**PX%,PY%** Splurge Eater's X and Y co-ordinates on screen  
**MX%,MY%** missile's X and Y co-ordinates on screen  
**CR%** contains value of character at location returned by FN READCH  
**OLDC%** hold the value of character to which missile is about to move on, used to reprint character after missile has moved to another location  
**SPL%** number of Splurges eaten  
**ANM** amount of colours used in setting up and animating grid  
**COL%( )** array holding possible colours for animation  
**LS** used in MOVE-LINE procedure to hold contents of line being moved





# Open your shers on these!



```

een" C$ provided. When used it moves the line";
200 PRINTC$ "you are on one space to the left." C$ "This
s should be used carefully as" C$ "5 points are deducted
each time it is" C$ "used. A warning note will sound if
" C$ "if you do not have enough points to" C$ "pay for us
ing the facility"
210 PRINTC$ "or if a SPLURGE is at the end of the" C$ "
line and would disappear if used."
220 PRINTCHR$13CHR$157CHR$13CHR$136" ] PRESS SPACE
BAR TO CONTINUE ["
230 A=GET:IF A<>32 GOTO230
240 PROCTIT
250 PRINTC$ "Also living on the grid is the" C$ "gua
rdian of the SPLURGES and he" C$ "doesn't like people eat
ing his" C$ "SPLURGES and will kill you if he gets" C$ "a
hold of you ! So beware !"
260 PRINTC$ "CONTROLS:" C$ " Z _ LEFT X
_ RIGHT " C$ "C$ " : UP / _ DOWN " C$ "C$ "
TAB MOVE LINE"
270 PRINTC$ "C$ "SCORE:" C$ " GRID SQUARE 1 Pt " C$ "
SPLURGE 10 Pts"
280 PRINTC$ "C$ "CHR$136 "BONUS GIVE OUT OF 300 AT END OF
EACH" C$ "CHR$136 " BOARD DEPENDING ON TIME TAKEN."
290 PRINTC$ "CHR$13CHR$157CHR$13CHR$136" ] PRESS SP
ACE BAR TO CONTINUE ["
300 A=GET:IF A<>32 GOTO230
310 PROCTIT
320 PRINT " "TAB(10) "LOADING MAIN PROGRAM"
330 VDU28,10,22,30,20
340 CHAIN "SPLURGE"
350 END
360 DEFPROCIT
370 CLS:VDU31,0,0,135,157,133,136,141,31,12,0:PRINT"*
S P L U R G E *":VDU31,0,1,135,157,133,136,141,31,12,1
:PRINT"* S P L U R G E *"
380 ENDPROC

```

## Listing 2

```

L.01
>L.
10 *TV255
20 DIMCOLX(9):HSCX=50
30 PROC ASS
40 MODE2:VDU23;8202;0;0;0;
50 DELX=0:SPEED=4:LIVESX=3:SCX=0
60 BRD=1:MANX=225
80 PROCSet_Up
90 REPEAT
100 PROC MAN
110 PROC Score_Board
120 IFNBX=1NBX=0:PROCNew_Board
130 DELX=DELX+1:IFDELX>SPEED DELX=0:PROC_MISSILE
140 UNTILLIVESX=0
150 PROCDEATH_TUNE
160 MODE7:PROC_Again
170 GOTO40
190 DEFPROC MAN
200 IFINKEY(-98)ANDPX<>0X=-1
210 IFINKEY(-67)ANDPX<19X=1
220 IFINKEY(-105)ANDPY<30Y=-1
230 IFINKEY(-73)ANDPY>1Y=-1
240 IFINKEY(-97)PROC MOVE_LINE
250 IFX=0ANDY=0THEN320
260 CRX=FNREADCH(PX+X,PY+Y)
270 IFCRX=32GOTO320
280 IFCRX=130SCX=SCX+1:SOUND1,2,210,1
290 IFCRX=137PROCEAT SPLURB
300 VDU31,PX,PY,32
310 PX=PX+X:PY=PY+Y
320 IFMANX=225MANX=227ELSEIFMANX=227MANX=225

```

```

330 COLOUR2
340 VDU31,PX,PY,MANX
350 X=0:Y=0
360 ENDPROC
380 DEFPROC_MISSILE
390 *FX21,0
400 IFPX<MXX=-1
410 IFPX>MXX=1
420 IFPY<MYX=-1
430 IFPY>MYX=1
440 CRX=FNREADCH(MX+X,MY+Y)
450 IFCRX<>32THEN510
460 IFFNREADCH(MX-1,MY)<>32X=-1:Y=0
470 IFFNREADCH(MX+1,MY)<>32X=1:Y=0
480 IFFNREADCH(MX,MY+1)<>32Y=1:X=0
490 IFFNREADCH(MX,MY-1)<>32Y=-1:X=0
500 IFFNREADCH(MX+X,MY+Y)=137CRX=137
510 SOUND0,-8,2,1
520 COLOUR6
530 VDU31,MX,MY,OLDCX
540 OLDCX=CRX
550 MX=MX+X:MY=MY+Y
560 COLOUR3
570 VDU31,MX,MY,224
580 IFCRX=129ORCRX=131PROC_KILL
590 X=0:Y=0:ENDPROC
610 DEFPROCSet_Up
620 TIME=0
630 LOCALI,J,FL
640 PX=0:PY=1:MX=19:MY=1:X=0:Y=0
650 OLDCX=130:SPLX=0:NBX=0:CX=0:ANM=RND(6)+3
660 RESTORE680
670 FORI=0TO9:READDDX:VDU19,DDX,6;0;:COLX(I)=DDX:NE
XT
680 DATA 4,5,6,8,10,11,12,13,14,15
690 PRINTTAB(0,0);SPC(20);:PROC Score_Board
700 FORI=0TO19
710 FORK=1TO30:COLOURCOLX(CX):VDU31,I,K,226
720 CX=CX+1:IFCX=ANM CX=0
730 NEXT
740 COLOUR9:DIFX=RND(DIFX):FORPX=0TODIFX
750 I=6+RND(12):J=5+RND(20)
760 FL=0:FORQ=1X-3TOIX+1:FORW=JX-1TOJX+1:CRX=FNREAD
CH(Q,W)
770 IFCRX<>130FL=1
780 NEXT
790 IFFL=1FL=0:GOTO750
800 SOUND1,5,40,2:SOUND2,5,50,3:VDU31,I,J,233
810 FORUX=-3TO1:VDU31,I+UX,J-2,32,31,I+UX,J+2,32:
NEXT
820 FORUX=-1TO1:VDU31,I+1,J+UX,32:NEXT
830 NEXT
840 VDU31,PX,PY,MANX
850 ENDPROC
870 DEFNREADCH(X,Y)
880 ?&71=X:&72=Y
890 CALLREC
900 C=?&75
910 =C
920 DEFPROC_KILL
930 LOCALS
940 SOUND0,-15,7,15
950 SX=233:FORI=250TO190STEP-8:SOUND1,-15,1,1:VDU31,P
X,PY,SX:SX=SX+1:FORD=0TO100:NEXT
960 SOUND0,1,4,20
970 FORD=0TO100:NEXT
980 LIVESX=LIVESX-1:IFLIVESX=0ENDPROC

```



## BBC PROGRAM

```

990 PROCSet_Up
1000 ENDPROC
1020 DEFPROC_EAT_SPLURB
1030 SOUND&102,3,100,10;SOUND&103,3,100,10
1040 SCX=SCX+10;SPLX=SPLX+1
1050 IFSPLX=DIFF+1NBX=1
1060 ENDPROC
1080 DEFPROCNew_Board
1090 BN=300-ABS(INT(TIME/50))
1100 PRINTTAB(3,9);SPC(13);TAB(3,10);" BONUS = ";BN;"
";TAB(3,11);SPC(13)
1110 FORD=1T01500:NEXT
1120 CX=0:RESTORE1160:FORF=1T033:READH,GX:SOUND&11,4,H
-48,16:SOUND&12,4,H-48,16:VDU19,COLX(CX),0;0;:FORG=1T0(
GX*70):NEXTG:VDU19,COLX(CX),6;0;
1130 CX=CX+1:IFCX=ANM CX=0
1140 IFINKEY(0)=32F=33
1150 NEXT
1160 DATA149,6,149,4,137,2,141,2,149,4,169,4,165,4,149
,4,149,4,149,4,137,2,141,2,149,4,169,4,165,4,149,4,149
,4,169,4,185,2,177,2,169,4,149,4,157,4,157,2,149,2,157,4
,129,4,129,4,137,4,141,4,149,4,137,4,121,8

1170 DIFF=DIFF+RND(3)+1:BRDX=BRDX+1
1180 IFSPEED>OSPEED=SPEED-.5
1190 SCX=SCX+BN:PRINTTAB(0,0);SCX
1200 PROCSet_Up
1210 ENDPROC
1230 DEFPROC_Score_Board
1240 COLOUR7:PRINTTAB(0,0);SCX;" ";TAB(10,0);BRDX;TAB(
15,0);LIVESX
1250 ENDPROC
1270 DEFPROC_Again
1280 PRINTTAB(10,10)"YOU SCORED ";SCX;" POINTS"
1290 IFSCX<HSCXGOTO1330
1300 PRINT"TAB(8)"AND YOU HAVE THE HIGH SCORE"
1310 HSCX=SCX
1320 FORI=0T0255STEP22:FORK=1T0255STEP22:SOUND1,5,K,1;
NEXT
1330 PRINTTAB(12,5)CHR$136"HIGH SCORE ";HSCX
1340 PRINTTAB(11,20);"TRY AGAIN ? (Y/N) ";
1350 A$=GET$:IFA$="Y"ORA$="Y"ENDPROC
1360 IFA$="N"ORA$="N"GOTO1380

```

```

1370 GOTO1340
1380 CLS:PRINT":*HELP
1390 PRINT"Look at all the nice chips you have in y
our computer why not use one today!":END
1410 DEFPROCMOVE_LINE
1420 L$="":VDU31,PX,PY,130,31,MX,MY,130:SOUND2,2,1
00,10
1430 FORLX=0T019:CRX=FNREADCH(LX,PY):L$=L$+CHR$(CRX):
NEXT
1440 IFLEFT$(L$,1)=CHR$137ORSCX<5SOUND3,-15,10,5:SOUND
3,-15,0,10:ENDPROC
1450 L$=MID$(L$,2,19)+CHR$130
1460 CRX=FNREADCH(PX+1,PY):IFCRX=137PROC_EAT_SPLURB
1470 COLOUR6
1480 PRINTTAB(0,PY);L$;
1490 SCX=SCX-5
1500 ENDPROC
1520 DEFPROC_ASS
1530 DIMSPACE 90:PX=SPACE:OS=&FFEE
1540 FORIX=0T02STEP2
1550 IOPTIX
1560 .REC
1570 LDA#31:JSR OS:LDA#71:JSR OS:LDA#72:JSR OS
1580 LDA#135:JSR&FFF4:STX&75:AND&75:LDA&75:STA&75DIV&1
00
1590 LDA#31:JSR OS:LDA#POS:JSR OS:LDA#VPOS:JSR OS
1600 RTS:J:NEXT
1610 ENDPROC
1620 DEFPROCDEATH_TUNE
1630 RESTORE1670:FORI=1T029:READCH,EN,PC,DU
1640 SOUNDCH,EN,PC,DU
1650 NEXT:FORI=1T04000:NEXT
1660 ENDPROC
1670 DATA &0201,-10,81,16,&0202,-10,65,35,&0203,-10,53
,35,1,0,0,1,1,-10,81,12,1,0,0,1,1,-10,81,4,1,0,0,1
1680 DATA &0201,-10,81,16,&0202,-10,61,35,&0203,-10,45
,35,1,0,0,1,1,-10,93,12,1,0,0,1,1,-10,89,4,1,0,0,1
1690 DATA &0201,-10,89,8,&0202,-10,81,36,&0203,-10,65
,36,1,0,0,1,1,-10,81,8,1,0,0,1,1,-10,81,12,1,0,0,1,1,-10
,77,4,1,0,0,1
1700 DATA &0201,-10,81,32,&0202,-10,61,32,&0203,-10,45
,32
>

```

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## COMPETITION

Prizes to a value of over £1,000 are offered by Mushroom Software in this week's competition.

20 first prizes of: Extended BASIC for the Commodore 64, together with Dune Buggy and Super Scramble, two new games.

With Dune Buggy, you have just spent a holiday in the African desert and you are returning through the Customs barrier. Unfortunately, you are carrying a fair amount of smuggled goods — and as you reach the barrier tension becomes so intense that you 'flip' and burst through the barrier.

Customs officials do not take kindly to your attempted escape, and launch an attack on you with helicopters and fireballs. You have the choice of either firing at the offensive objects, or jumping over them.

Graphics on this game are particularly good, with the screen split seven times to give a realistic effect.

In Super Scramble, you are the pilot of a rocket ship, and your mission is to destroy both the rockets launching by shooting at them, and the fuel dumps on the ground by bombing. This mission will take you through seven screens (if you're good enough), with the final part being to bomb a giant mushroom.

Once again, special care has been taken with the graphics — a feature that Mushroom Software intends to keep with all the games it produces.

Add to these two games the Extended BASIC, and this makes each one of the 20 winners' packages worth a total of £32.50.

There are also 27 runners-up prizes of each of the two games.

You could be one of the prize-

# Win three great programs from Mushroom

**Here is your chance to win more than £30-worth of software for your Commodore 64, including new titles Dune Buggy and Super Scramble**

winners by just finding as many differences as possible in the two cartoons.

### How to enter

Study the two cartoons — there are a number of differences between them. Circle the differences on carton B and seal the cartoon and coupon in an envelope. Write clearly the number of differences you found on the back of the envelope.

Post your entry to Mushroom Software Competition, Home Computing Weekly, No. 1, Golden Square, London W1R 3AB. Entries close at first post on Friday August 31, 1984.

You may enter as many times as you wish, but each entry must be on an official coupon — not a copy — and sealed in a separate envelope.

**Important:** please follow carefully the guidelines on entering — incomplete coupons and entries in envelopes with no numbers on the back cannot be considered. If you are a winner, the coupon will be used as a label to send your prize so clear writing is essential.

### The rules

Entries will not be accepted from employees of Argus Specialist Publications, Mushroom Software and Alabaster Passmore & Sons. This restriction also applies to employees' families and agents of the companies.

The How to Enter section forms part of the rules.

## Mushroom Software Competition

### Entry Coupon

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

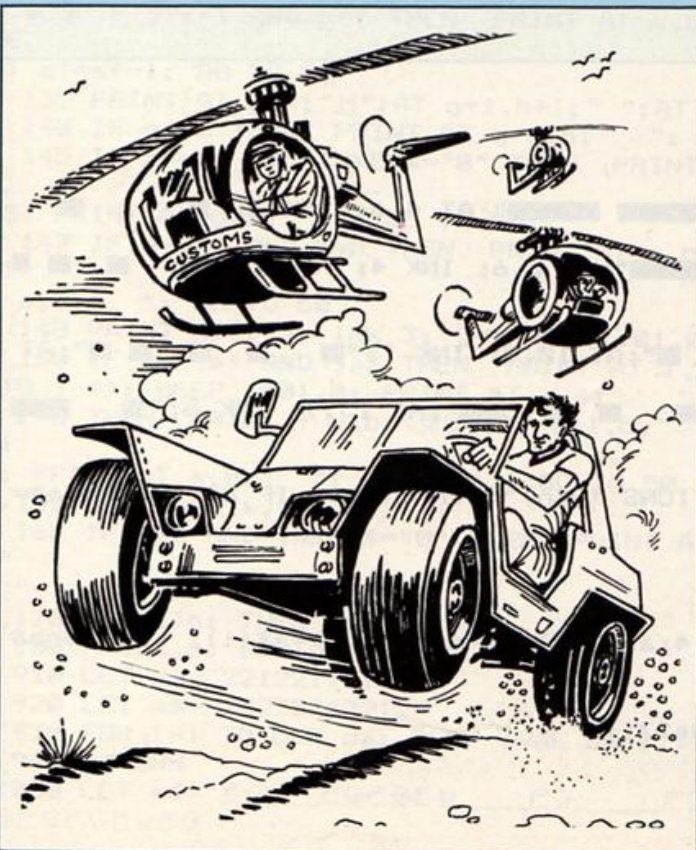
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ post code \_\_\_\_\_

Number of differences found \_\_\_\_\_

Complete clearly and fully — if you are a prizewinner this will act as a label. Post to Mushroom Software Competition, Home Computing Weekly, No.1 Golden Square, London W1R 3AB. Closing date: first post, Friday August 31, 1984. Don't forget to follow closely the advice in the How to Enter section, including writing the number of differences on the back of your envelope.





## Starfox

### How it works

4-6 title page  
40-170 main loop  
910-940 tune subroutine  
1000-1020 variables  
3000-4010 UDGs  
5000-5030 instructions  
6000-6040 end of game

## Starfox Variables

a,b your ship's co-ordinates  
x,y,c,d,e,f,g,h aliens' co-ordinates  
a\$ land  
b\$ land  
c\$ fire  
sf lives  
sc score  
hi hi-score

## Hunch

### How it works

**1-1000 variables**  
**1000-1200** set up screen  
**1500-6999** main loop  
**7000-7999** fifth level  
**8000** titles  
**9000** UDGs

### Hunch Variables

sc score  
hs hi-score  
fd,fa fireball's co-ordinates  
ad,aa arrow's co-ordinates  
posd, posa, your position  
dir rope's position (level 5)  
a control variables — is there  
an arrow?  
f control variables — is there  
a fireball?  
lev level  
li lives

## Hunch by Stephen Forde

Take pity on the poor old hunchback of Notre Dame. Help him ring the bell and escape Esmerelda, while avoiding flying missiles from the ground.

He deserves to be given a helping hand — no-one else will help him. Do your good deed for the day and feel better for it.

This is a multi-level version for 16 and 48K Spectrums, so your skills will be rewarded by new screens to conquer.

This game has great graphics and we're sure you'll find it's entertaining and fun to play.

# Three o

**You get good value for money here — three great games for the price of one. They're alien-zapping specials, with good graphics and imagination**

## Cells by Stephen Forde

Mutant cells will destroy the world unless you can stop them. An accident at a chemical factory has unleashed on the unsuspecting world a horde of cells which is placing our lives in peril.

Shoot down the cells —  
and save us all from destruc-  
tion!

### Cells Variables

**ala, ald, a2a, a2d, a3a, a3d**  
 aliens' co-ordinates  
**posa, posd,** your ships' co-  
 ordinates  
**s** score  
**hs** hi-score  
**f** control variable to check if  
 you are firing  
**x,y** co-ordinates of stars

## Cells

### How it works

Cells is very straightforward and ideal for beginners to learn from.  
1-1000 variables, instructions  
1000 main loop  
9000 UDGs

### Hints on conversion

Spectrum BASIC is fairly standard, with some unique commands

**INK** set the writing colour  
**BORDER** set the border colour  
**PAPER** set the background colour  
**INKEYS** check which key is pressed. Some micros use GET for this purpose  
**BEEP** sound. Other micros may be able to enhance this game with load explosions.  
**DATA** set graphics.

### Listing for Starfox

```

1 LET hi=0
2 LET p=1
3 BORDER 0: PAPER 0: INK 7: CLS
4 GO SUB 3000
5 PRINT AT 3,6; INK 1;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 4,6; INK 2;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 5,6; INK 3;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 6,6; INK 4;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 7,6; INK 5;"■■■■■ ■■■■■ ■■■■■ ■■■■■"
6 PRINT AT 9,9; INK 6;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 10,9; INK 1;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 11,9; INK 2;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 12,9; INK 4;"■■■■■ ■■■■■ ■■■■■ ■■■■■";AT 13,9; INK 5;"■■■■■ ■■■■■ ■■■■■ ■■■■■"
7: PRINT AT 16,1;"DO YOU WANT INSTRUCTIONS (y/n)": INPUT a$: IF a$="y" OR a$="Y" THEN GO SUB 5000
9 CLS
20 GO SUB 2000
30 GO SUB 1000
40 PRINT AT 5,0; INK 5;b$;AT 20,0; INK 4;a$: LET a$=a$(2 TO )+a$(1): LET b$=b$(2 TO )+b$(1)
41 PRINT AT 2,2;"SCORE:";sc
42 LET i=INT (RND*14)+6: LET j=INT (RND*27)+2
43 PRINT AT 2,24;"HI:";hi
45 PRINT AT 2,14;"SHIPS:";sf
46 IF sf=0 THEN GO TO 6000

```



# f a kind

• Remember that in Spectrum programs, capital letters in PRINT statements should be added in GRAPHICS mode, unless they form words.

```

50 PRINT AT a,b;"@@";AT a+1,b;" ";AT a-1,b;" "
60 LET a=a+(INKEY$="6")-(INKEY$="7")
70 IF INKEY$="0" THEN BEEP .01,45: PRINT AT a,b+2; INK 5;c$;AT a,b+2;"
   ": IF a=x THEN PRINT AT x,y;"E": BEEP .3,45: LET sc=sc+10
:
PRINT AT x,y;" ": GO SUB 1010
75 IF a=c AND INKEY$="0" THEN PRINT AT c-1,d+1;"E": BEEP .01,40: PRINT AT c-
1
,d+1;" ": LET sc=sc+20: LET c=5: LET d=19: LET c$=""
77 IF a=c AND b=d THEN PRINT AT a,b;"EE";AT a+1,b;" ";AT a-1,b;" ": GO SUB
910: PRINT AT a,b;" ": LET sf=sf-1: LET a=11: GO TO 50
80 IF a=20 THEN PRINT AT a-1,b;"EE": GO SUB 910: PRINT AT a-1,b;" ": LET sf=
sf-1: LET a=11: GO TO 50
85 IF a=5 THEN PRINT AT a+1,b;"EE": GO SUB 910: PRINT AT a+1,b;" ": LET sf=
sf-1: LET a=11: GO TO 50
90 PRINT AT x,y; INK 5;"@";AT x,y+1;" ": LET y=y-1
95 IF y<=1 THEN PRINT AT x,y;" ": LET y=28: GO TO 90
100 IF x=a AND y=b THEN PRINT AT a,b;"EE";AT a+1,b;" ";AT a-1,b;" ": GO SUB
910: PRINT AT a,b;" ": LET sf=sf-1: LET a=11: LET b=2: PRINT AT a,b;"@@".
110 PRINT AT c,d; INK 4;" I ";AT c-1,d;" ";AT c+1,d: LET c=c+1: IF c=19 THEN
LET c=c-1: LET d=d-1: IF d<=1 THEN PRINT AT c,d;" ": LET d=28
120 PRINT AT e,f; INK 6;" U ";AT e+1,f-2;" ";AT e-1,f+2;" ": LET e=e+1: LET
f
=f-2: IF e>=20 THEN PRINT AT 19,3;" ": LET e=6: LET f=28
130 IF a=e-2 AND INKEY$="0" THEN PRINT AT e-1,f+3;"E": BEEP .01,10: LET sc=sc
+
30: PRINT AT e-1,f+3;" "
133 IF a=e-1 AND b=f THEN PRINT AT a,b;"EE": GO SUB 910: PRINT AT a,b;" ": L
E
T sf=sf-1: GO TO 50
135 PRINT AT g,h;"H";AT g+1,h+1;" ";AT g-1,h-1;" ": LET g=g-1: LET h=h-1
140 IF g<=6 THEN PRINT AT g+1,h;" ": LET g=20: LET h=15
145 IF a=g+1 AND INKEY$="0" THEN PRINT AT g+1,h+1;"E": BEEP .01,0: LET sc=sc+
1
5: PRINT AT g,h;" ": GO TO 50
147 IF a=g+1 AND b=h THEN PRINT AT a,b;"EE": GO SUB 910: LET sf=sf-1: PRINT A
T
a,b;" ": GO TO 50
148 PRINT AT i,j; INK 3;"Q": BEEP .01,0
150 IF RND<sf AND j>5 THEN PRINT AT i,4; INK 6;" "
TO j-4): BEEP .001,0: PRINT AT i,4;" "
i=a THEN PRINT AT a,b;"EE";AT a+1,b;" ";AT a-1,b;" ": GO SUB 910: LET sf=sf-
1
: PRINT AT a,b;" ": LET a=11: GO TO 50
155 PRINT AT i,j;" "
160 IF a=i AND INKEY$="0" THEN PRINT AT i,j;"E": LET sc=sc+100: PRINT AT i,j;
"
"
170 IF sc>hi THEN LET hi=sc
900 PAUSE p: GO TO 40
910 LET d$="22122111114"
920 LET e$="22225442212"
930 FOR l=1 TO LEN d$: BEEP (VAL d$(l))/6,VAL e$(l): NEXT l
940 RETURN
1000 LET a$="EG__EGEGEG__EG__EGEG__": LET b$="EGEGEGEGEG__EGEGEG
EGEGEGEGEGEG

```



```

EGEGEGEG"
1001 LET a=11: LET b=2
1002 LET c$=" "
1003 LET sc=0: LET sf=3
1004 LET c=5: LET d=15: LET e=6: LET f=28: LET g=20: LET h=16
1010 LET x=INT (RND*13)+7: LET y=25
1020 RETURN
2000 PLOT 0,146: DRAW 255,0: DRAW 0,25: DRAW -255,0: DRAW 0,-25
2020 RETURN
3000 RESTORE : FOR x=USR "a" TO USR "j"+7: READ z: POKE x,z: NEXT x: RETURN
3010 DATA 128,192,224,255,255,255,62,0
3020 DATA 0,0,0,248,252,252,0,0
3030 DATA 24,36,66,153,153,66,36,24
3040 DATA 34,54,62,42,62,62,28,8
3050 DATA 17,68,17,149,34,0,72,1
3060 DATA 1,2,4,8,16,32,64,128
3070 DATA 128,64,32,16,8,4,2,1
3090 DATA 16,56,124,124,124,124,108,68
4000 DATA 28,62,107,62,73,34,73,34
4010 DATA 0,24,36,66,129,255,255,36
5000 CLS : PRINT TAB 10;"Q STAR FOX Q"
5010 PRINT ""YOU are the last defender ship.""Your job is to destroy the aliens
"" SCORING"" Q=10 Points"" H=15"" I=20"" J=30""
Q=100!"
5020 PRINT ""DON'T get too close to the UFO""AND watch out for the STAR FOX!!"
: PRINT TAB 10;"GOOD LUCK!"
5030 PRINT #1;"Press a Key"
5040 IF INKEY$="" THEN GO TO 5040
5045 CLS
5050 PRINT AT 7,9;"CONTROLS:-";AT 9,12;"6=DOWN";AT 10,12;"7=UP";AT 11,12;"0=FIRE"
"
5060 FOR n=1 TO 20: BEEP .1,INT (RND*45): NEXT n.
5070 CLS : RETURN
6000 PAPER 7: CLS : PRINT AT 10,10; BRIGHT 1; FLASH 1; INK 0;" GAME OVER "
6010 PRINT AT 11,8; INK 0;"YOU SCORED:";sc;AT 12,16; INK 0;"Hi=";hi
6020 PRINT #1;"Press any Key"
6030 PAUSE 0
6040 PAPER 0: INK 7: CLS : GO TO 7

```

## Listing for Hunch

```

1 LET sc=0: LET hs=0: INK 7: PAPER 0: BORDER 0: CLS : GO TO 8000
2 CLS : LET lev=0: LET li=3 : LET acc=0
3 CLS : LET fa=24
5 LET ba=10
7 LET a=0
8 LET f=0
9 LET dir=0
20 LET fd=12: LET fa=27
30 LET ad=12: LET aa=24
40 LET posd=12: LET posa=1
100 RESTORE : GO SUB 9500
110 LET a=0: LET f=0
1000 IF li<=0 THEN GO TO 8000
1001 LET lev=lev+1
1004 IF lev=5 THEN GO TO 7000
1005 IF acc=3 THEN PRINT AT 1,8;"@ @ @": FOR d=-30 TO 30: BEEP .005,d: NEXT d:
LET sc=sc+500: LET acc=0
1007 PRINT AT 7,0; INK 2;" "
1008 PRINT AT 8,30; INK 2;"I"
1009 PRINT AT 6,0;"CORRIDOR ";lev
1010 IF li<=0 THEN PRINT AT 9,11;"GAME OVER": FOR j=1 TO 200: NEXT j: GO TO 800
0.

```



## PROGRAMS

```

1011 PRINT AT 13,0; INK 2;"EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE  

EEEEEEEEEEEEEE  

EEEEEEEEEEEEEEEE E E E E   E   E E EEEEEEEEEEEEEEE   E E E E E EEE  

EEEEEEEEEEEEEE  

E E E   E E E   E E EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE  

EEEEEEEEEEEEEEEEEEEE  

EEEEEEEEEEEEEE"
```

1015 PRINT AT 3,11;"SCORE ";sc

1016 IF li=2 THEN PRINT AT 0,25; INK 4;"B B";AT 1,25; INK 4;"B B "

1017 PRINT AT 0,18;"LIVES:"; IF li=0 THEN PRINT AT 0,25;" " "

1018 IF li=1 THEN PRINT AT 0,25; INK 4;"B ";AT 1,25; INK 4;"B "

1019 IF li=3 THEN PRINT AT 0,25; INK 4;"B B B";AT 1,25; INK 4;"B B B"

1020 PRINT AT posd-1,posa; INK 3;" B ";AT posd,posa; INK 3;" B "

1030 PRINT AT 9,29;" @ ";AT 10,29;" H";AT 11,29;" I"

1040 IF lev>1 THEN PRINT AT 13,4; INK 2;"D";AT 13,7; INK 2;"D";AT 13,15; INK 2;  
"D";AT 13,23; INK 2;"D";AT 13,26;"D"  
1050 IF lev>2 THEN LET fa=24:LET a=1  
1060 IF lev>3 THEN LET aa=21:LET f=1:LET aa=21  
1070 PRINT AT 1,2;"BONUS "  
1079 IF acc=0 THEN PRINT AT 1,8;" "  
1080 IF acc=1 THEN PRINT AT 1,8;"@ "  
1081 IF acc=2 THEN PRINT AT 1,8;"@@ "  
1082 IF acc=3 THEN PRINT AT 1,8;"@@@ "  
1100 PRINT AT posd,0;" ";AT posd,posa; INK 4;" B "

"

1200 BEEP .5,0: BEEP .5,0: BEEP .3,0: BEEP .4,5: BEEP .4,4: BEEP .4,0  
1499 REM MOVE  
1500 PRINT AT 3,11; INK 5;"SCORE ":PRINT AT 3,11; INK 5;"SCORE ";sc  
1501 IF li<=0 THEN GO TO 8000  
1502 IF INKEY\$="a" THEN GO TO 8000  
1503 IF INKEY\$="h" THEN PAUSE 0  
1504 IF INKEY\$="A" THEN GO TO 8000  
1510 IF posa>=27 THEN BEEP .05,0: BEEP .05,2: BEEP .05,6: LET sc=sc+150: LET ac  
c=acc+1: PRINT AT posd,posa;" ";AT posd-1,posa;" ":LET posa=2: GO TO 1000  
1600 IF INKEY\$="w" THEN BEEP .005,0: LET sc=sc+10: LET posa=posa+1  
1605 IF posa>=1 AND INKEY\$="q" THEN BEEP .005,0: LET posa=posa-1: LET sc=sc-10  
1610 IF INKEY\$="m" THEN PRINT AT posd,posa;" ";AT posd-1,posa;" ":PRINT AT  
posd-2,posa+2; INK 3;"@": BEEP .005,10: PRINT AT posd-3,posa+2; INK 3;"B": BEE  
P  
.005,14: LET sc=sc+20: PRINT AT posd,posa;" ";AT posd-1,posa;" ":PRINT AT  
posd-2,posa+1;" ":PRINT AT posd-3,posa+1;" ":LET posa=posa+2  
1630 LET fa=fa-1  
1635 IF f<>0 AND aa<=1 THEN PRINT AT ad,aa;" E ";AT ad,aa+2;" "  
1640 LET aa=aa-2  
1660 IF f>0 THEN PRINT AT ad,aa;" E ";AT ad,aa+2;" "  
1665 IFa<>0 AND fa<=1 THEN PRINT AT fd,fa;" ":LET fa=26  
1670 IF a=1 THEN PRINT AT fd,fa;" @ "  
6010 PRINT AT posd,posa; INK 3;" B ";AT posd-1,posa; INK 3;" B "  
6990 IF lev>1 THEN GO TO 8500  
6999 GO TO 1500  
7000 CLS : PRINT AT 13,0; INK 2;"EEEEEEEEEEEEEE";AT 14,0; INK 2;"EEEEEEEEEEEEEE  
";AT 15  
,0; INK 2;"EEEEEEEEEEEEEE";AT 16,0; INK 2;"EEEEEEEEEEEEEE";AT 17,0; INK 2;"EEE  
EEEEEEEEEE  
"

7001: PRINT AT 13,21; INK 2;"EEEEEEEEEEEEEE";AT 14,21; INK 2;"EEEEEEEEEEEEEE";  
AT 15,21  
; INK 2;"EEEEEEEEEEEEEE";AT 16,21; INK 2;"EEEEEEEEEEEEEE";AT 17,21; INK 2;"EEE  
EEEEEEEEEE  
"

7002 PRINT AT 21,0; INK 7;" RESCUE ESMARELDA"  
7003 PRINT AT 17,11; INK 7;"~~~~~"  
7004 LET posa=2: LET posd=12: LET dir=0  
7005 PRINT AT 1,0; INK 2;"  
7006 LET dir=0



[illegible]



# PROGRAMS

```

9499 STOP
9500 FOR f=USR "a" TO USR "k"+7: READ a: POKE f,a: NEXT f
9510 DATA 0,BIN 00110000,BIN 00111000,BIN 00111000,BIN 01111111,BIN 11111100,BIN
11111010,BIN 11111001,BIN 01111000,BIN 00111000,BIN 00111000,BIN 00111100,BIN 0
1100110,BIN 11000110,BIN 10000111,128
9520 DATA 0,BIN 01110010,BIN 01111010,BIN 11111101,BIN 10111010,BIN 01011101,BIN
00110010,0
9530 DATA BIN 10000001,BIN 11000001,BIN 11100001,BIN 11100011,BIN 11100011,BIN 1
1110011,255,255
9540 DATA 16,32,64,255,255,64,32,16
9550 DATA 0,126,126,126,126,126,126,0
9560 DATA BIN 00011000,BIN 00111100,BIN 01111110,255,0,255,8,8
9570 DATA 8,8,8,8,8,8,8,8,8,8,8,8,8,8,8,8
9580 DATA 0,0,BIN 00011000,BIN 00111000,BIN 00011000,BIN 01011010,BIN 10011001,B
IN 00011000,BIN 00011000,BIN 00100100,BIN 01000100,BIN 01000100,BIN 01000100,BIN
01000100,BIN 11001100,0
9999 RETURN

```

## Listing for Cells

```

2 BORDER 0: PAPER 0: INK 7: CLS : PRINT AT 10,9; PAPER 1; PAPER 4; INK 0; FLA
SH 1;"Please wait": GO SUB 9000
3 CLS : INK 7: BORDER 0: PAPER 0
4 PRINT "          @@@@CELLS@@@@" : PRINT "          By S.Forde & D.LAURIE"
5 PRINT "Would you like instructions(y/n)": INPUT i$
7 IF i$="y" OR i$="Y" THEN GO SUB 8000
8 FOR e=0 TO 30: BEEP .005,RND*20: PRINT AT 9,e; INK 4;" @ ": BEEP .005,RND*
2
0: PRINT AT 11,e; INK 2; INK 2;" @ ": NEXT e: PRINT AT 9,e;" @ ": PRINT AT 11,e
;
"
9 FOR q=0 TO 30: BEEP .005,RND*20: PRINT AT 9,q; INK 4;" @ ": BEEP .005,RND*
2
0: PRINT AT 11,q; INK 2; INK 2;" @ ": NEXT q: PAUSE 20
10 REM ***VARIABLES***
13 LET a4a=1
15 LET hs=0
17 LET s=0: LET hits=0
20 LET posa=10: LET posd=20
30 LET a1a=INT (RND*30)+1
40 LET a1d=5
50 LET a2a=INT (RND*30)+1
60 LET a2d=5
70 LET a3d=5: LET a3a=INT (RND*29)+1
100 LET f=0
200 REM ***SET UP SCREEN***
210 BORDER 0: PAPER 0: INK 7: CLS
220 FOR f=1 TO 50
230 LET x=RND*240
240 LET y=RND*175
250 PLOT x,y
260 NEXT f
265 PRINT #0; PAPER 2; INK 0;"          CELLS          "
300 REM ***MOVE!***
301 IF INKEY$="x" OR INKEY$="X" THEN PAUSE 0
302 PRINT AT 1,12;"HITS ";hits: IF hits=15 THEN PRINT AT 10,10;"Game over": FO
R q=1 TO 15: NEXT q: GO TO 1000
303 PRINT AT 1,20;"HI-SCORE ";hs
305 PRINT AT 1,2;"SCORE ";s
307 PRINT AT 5,0;"          "
310 IF posa>3 AND INKEY$="1" THEN LET posa=posa-2
320 IF posa<27 AND INKEY$="2" THEN LET posa=posa+2
330 IF INKEY$="0" THEN LET f=1
400 BEEP .005,1: PRINT AT posd,posa; INK 5;" @ @ "
410 PRINT AT a1d,a1a;"          "
420 LET a1d=a1d+1

```



```

430 LET a1a=a1a+1
440 PRINT AT a1d,a1a; INK 2;" @ "
450 IF a1a>25 THEN PRINT AT a1d,a1a;" ": LET a1a=1: GO TO 300
460 PRINT AT a2d,a2a;" "
470 LET a2d=a2d+1
480 BEEP .005,2: LET a2a=a2a-1
490 PRINT AT a2d,a2a; INK 4;" @ "
491 PRINT AT a3d,a3a;" "
493 LET a3d=a3d+1: PRINT AT a3d,a3a; INK 6;"@@"
496 LET a4a=a4a+1: PRINT AT 4,a4a; INK RND*6;" @ "
500 IF a2a<3 THEN PRINT AT a2d,a2a;" ": LET a2a=24: GO TO 300
510 IF a1d>19 THEN PRINT AT a1d,a1a;" ": LET hits=hits+1: LET a1d=5: GO TO 300
520 IF a2d>19 THEN PRINT AT a2d,a2a;" ": LET hits=hits+1: LET a2d=5: GO TO 300
530 IF a3d>18 THEN LET hits=hits+1: PRINT AT a3d,a3a;" ": LET a3d=5: LET a3a=INT (RND*29)+1: GO TO 300
540 IF a4a>28 THEN LET a4a=1: GO TO 300
550 IF f=1 AND posa=a4a THEN PRINT AT 4,a4a;" @": LET a4a=1: LET s=s+20: PRINT AT 4,a4a;" @": BEEP .03,-10: PRINT AT 4,a4a;" ": GO TO 300
590 IF f=1 THEN GO TO 600
599 GO TO 300
600 LET old=posa+2
610 LET oldd=posd
620 LET oldd=oldd-2
630 PRINT T oldd,old; BRIGHT 1;"@H": PAUSE 5: PRINT AT oldd,old;" "
632 LET oldd=oldd-2
650 BEEP .002,oldd: PRINT AT oldd,old; BRIGHT 1;"@H": PRINT AT oldd,old;" "
651 LET oldd=oldd-4
653 LET oldd=oldd-4
654 BEEP .002,oldd+2: PRINT AT oldd,old; BRIGHT 1;"@H": PRINT AT oldd,old;" "
655 LET oldd=oldd-4
660 BEEP .002,oldd+10: PRINT AT oldd,old; BRIGHT 1;"@H": PRINT AT oldd,old;" "
665 LET oldd=oldd-2: PRINT AT oldd,old; BRIGHT 1;"@H": PRINT AT oldd,old;" "
670 IF old-1=a1a AND oldd<=a1d THEN LET s=s+15: BEEP .1,10: PRINT AT a1d,a1a;" ": LET a1d=5: LET a1a=INT (RND*29)+1: GO TO 300
680 IF old-1=a2a AND oldd<=a2d THEN LET s=s+10: BEEP .1,7: PRINT AT a2d,a2a;" "; AT a2d,a2a;" ": LET a2d=5: LET a2a=INT (RND*29)+1: GO TO 300
681 IF old=a3a OR old+1=a3a OR old-1=a3a AND oldd<=a3d THEN LET s=s+10: BEEP .1,13: PRINT AT a3d,a3a;" "; AT a3d,a3a;" ": LET a3d=5: LET a3a=INT (RND*29)+1: GO TO 300
700 LET f=0
710 GO TO 300
1000 IF s>hs THEN LET hs=s: FOR g=0 TO 7: BORDER g: BEEP .01,g-1: BEEP .005,g+1: NEXT g: BORDER 0: FOR f=-50 TO 50: BEEP .005,f: NEXT f: CLS: PRINT "That's a new high score!": PAUSE 100
1010 CLS: BEEP .4,2: BEEP .4,-3: PRINT "Another game(y/n)?: INPUT a$
1020 IF a$="n" OR a$="N" THEN STOP
1030 GO TO 17
8000 CLS: PRINT "CELLS"
8005 PRINT "(original version for the TI99/4A by Paul Clarke)": PRINT "By S.Forde"
8010 PRINT "'After an accident at a chemical factory,a group of cells have escaped,and will destroy the world..."
8020 PRINT "'UNLESS..."
8030 PRINT "'You can stop them with your INTERGALACTIC MEGABLASTER (gun, to you)"
8040 PRINT "'1-left 2-right"
8050 PRINT " 0-fire"
8500 PAUSE 0: GO TO 10: RETURN
9000 FOR f=USR "a" TO USR "j"+7: READ o: POKE f,o: NEXT f
9004 DATA 60,126,219,255,189,195,126,60
9006 DATA 60,66,165,129,195,189,66,60
9008 DATA 66,32,130,0,32,136,0,148
9010 DATA 32,0,0,32,0,144,0,129

```

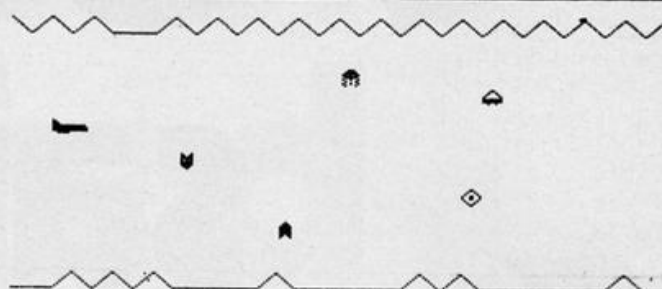


# PROGRAM

```

9019 DATA 1,1,35,35,127,195,255,126
9020 DATA 128,128,196,196,254,195,
    255,126
9030 DATA 0,0,1,1,3,127,7,6
9040 DATA 0,0,128,128,192,254,224,96
9050 DATA 60,126,153,255,129,
    231,126,60
9060 DATA 126,153,255,219,231,189,
    129,126
9100 RETURN
    
```

SCORE: 0 SHIPS: 3 HI: 85



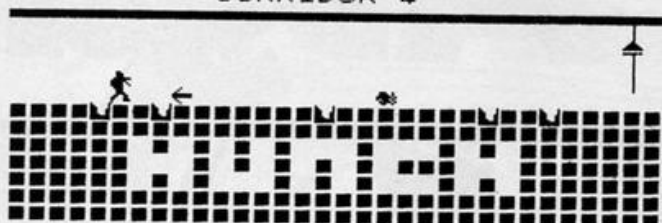
Screen dump for Starfox

BONUS

LIVES:

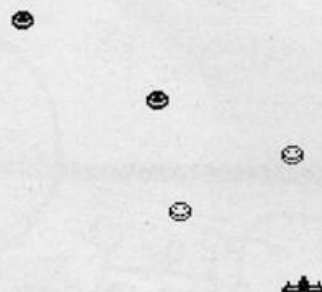
SCORE 2990

CORRIDOR 4



Screen dump for Hunch

SCORE 135 HITS 14 HI-SCORE 0



Screen dump for Cells



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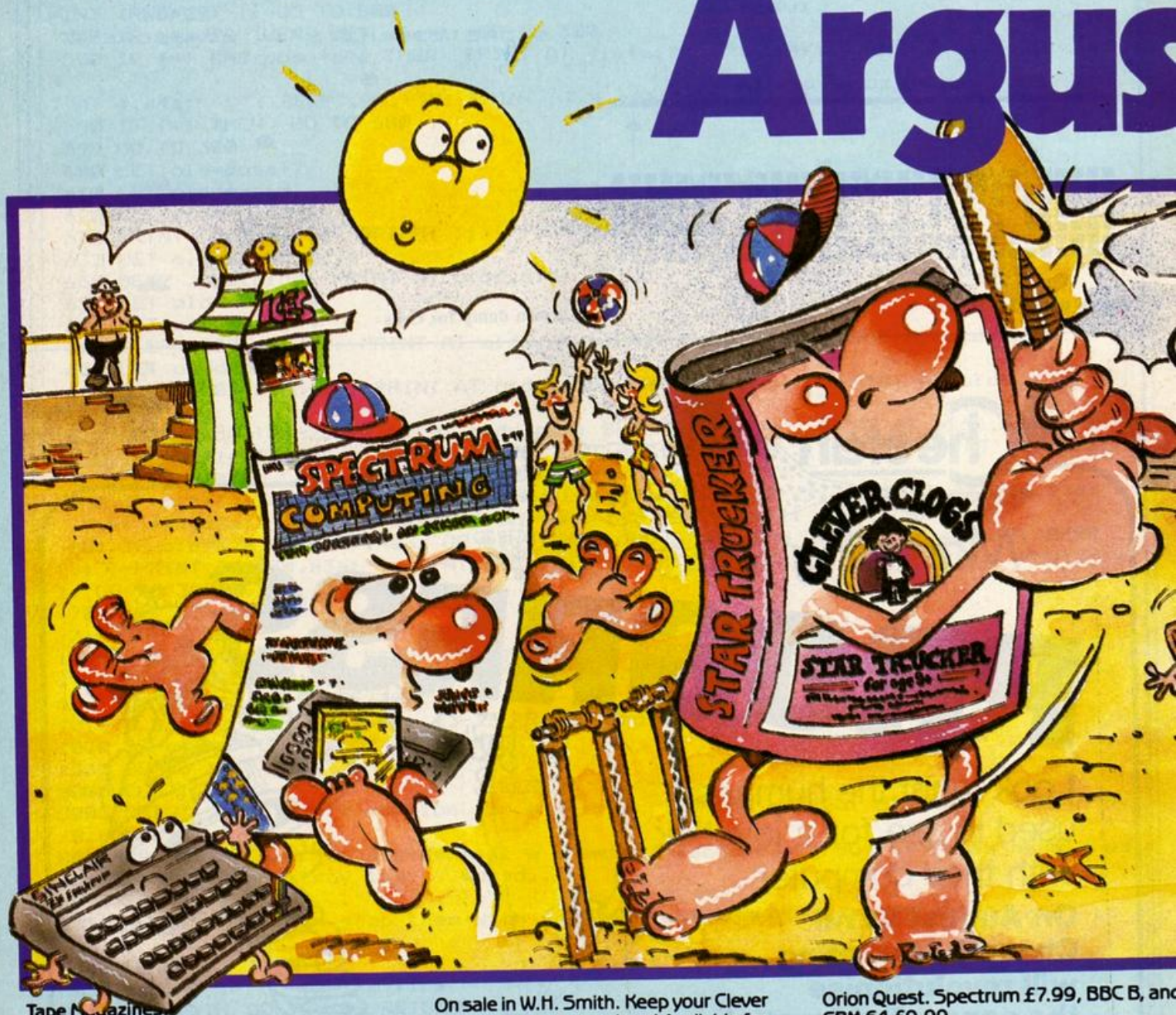
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## Mr Dig CBM 64 £8

Microdeal, 41 Truro Rd, St Austell, Cornwall PL25 5JE

This is a version of Mr Do for the Commodore 64.

The aim is to kill four Meanies who move around the tunnels which you dig. Do this by throwing a ball or dropping an apple on them. Killing all the Meanies will send you on to the next screen.

After a while the Meanies mutate and turn into Miners who dig their own tunnels. If you eat the treat at the centre of the screen then the Meanies/Miners will become unfrozen. Killing five Letter Monsters will give you a free life.

In principle it sounds complicated although after some practice it becomes entertaining and very addictive.

Sound and graphics are both very good. There is clearly a close resemblance between this and the arcade version.

Loading is very fast — it only takes about three minutes. Microdeal has incorporated its own fast loading system and I find it's more reliable than that used by most other companies. So far I've not had any loading problems. **K.I.**

instructions	70%
playability	90%
graphics	85%
value for money	90%



## Cassette 50 CBM 64 £9.95

Cascade Games, Suite 4, 1-3 Haywra Cresc, Harrogate HG1 5B4

This is one of those amazing tapes which offer you 50 games on one cassette, all are written in BASIC. They're fairly short and simple. A wide variety of subjects are included to suit all tastes.

The quality isn't very good. I found the games slow and boring and not very user-friendly. On one program the instructions gave me the wrong keys to use and I had to list the program to find out what to press. Another game was unplayable on a black and white TV because the colours used were very similar

shades of grey. The full list of faults is too long to mention here. Joysticks aren't utilized very often; the keyboard is used most of the time.

Brief instructions are supplied with the cassette. All directions are given on a menu screen with each game.

Graphics and sounds would be very impressive if they were produced by a standard 1K ZX80 but as for the CBM 64... need I say more?

No loading problems were encountered — at least they've got something right. **K.I.**

instructions	10%
playability	10%
graphics	10%
value for money	5%



## Star Trooper CBM 64 £5.95

Melbourne House, Church Yd, Tring, Herts HP23 5LU

Star Trooper is yet another version of the ever popular Space Invaders/Galaxian theme. The object of the game is to shoot the enemy invaders which move from side to side and down the screen.

You control a small man with a jet-pack on his back. Movement is very simple — your joystick will move your man while held in a direction. It would have been nice if inertia had been included. To shoot the enemy you press the fire button which releases a missile in the direction you are facing.

The graphics incorporate some good scrolling effects in the background and include quite good detail on your playing man. Other than this they are fairly standard.

There is quite an interesting rhythm playing when the program is waiting for you to start the game. However, the sounds used during play are nothing special.

Enclosed with the cassette is a card which you may fill in and send away so that Melbourne House can keep you informed of any new software. **K.I.**

instructions	30%
playability	50%
graphics	50%
value for money	40%



# Games, games and more games

Here's a selection of games for  
Commodore, Spectrum and  
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reviewers think before you  
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## The Wall TI-99/4A £6

Stainless, 10 Alstone Road, Stockport, Cheshire

A wicked wizard has set you the task of climbing castle walls. For every wall successfully scaled points are awarded, but on each there are forces of spritely adversaries poised to attack, archers, dragons, witches on broomsticks and multicoloured cannonballs, just to mention a few.

Before attempting to bid for freedom you need to study their moves carefully. On each screen the attackers, and the way in which they travel, are different.

A collision loses a life, but for every 500 points there's a bonus life. The game ends when all lives

are lost and the score displayed. If you're lucky this may be high enough to qualify your name to be entered in the Hall of Fame.

Control is from keyboard or joystick. You are unable to start until the alpha lock is up, a useful feature if you intend using the joystick option.

I can't say exactly how many different screens there are to survive. Ten was the most I could manage and there are more. There's certainly enough variety to keep you hooked on trying. Needs Extended BASIC. **J.W.**

instructions	90%
playability	85%
graphics	80%
value for money	90%



## New Venture 48K Spectrum £5.95

Falcon Computing, 65 Earnsdale Rd, Darwen, Lancs

"If I were a rich man" announces the loading of a program that will test whether you can survive in business. New Venture starts with full, simple instructions. You have £25,000 and the aim is to be able to afford the ultimate in luxuries — the priceless Falconmobile.

There are six retail businesses, four sites and seven options — commence trading, adverts, visit bank manager, check bank statement, check or update stock, make insurance inquiries or quit. Your ZX printer can copy the list. The program contains a yearly inflationary figure — so that a £15,000 shop (where?) costs £30,000 in 2001.

As the game proceeds you are offered various luxuries, the acquisition of which gains points. Sudden burglaries, fires or accidents reduce your profits, unless insurance has been obtained. Your staff put in for a pay rise. At the end of each round, when a month's trading finishes, pages of trading levels of each saleable item are shown in graph and percentage form, then trade figures and a bank statement.

An interesting idea, with a PG rating — suitable for intelligent people above the age of 14. **T.W.**

instructions	90%
playability	80%
graphics	40%
value for money	75%





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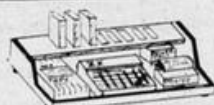


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